

The critical issue is: the logic in natural languages and sciences is much more complicated than the logic (or logics) in programming languages, or any other existing logics. Large language models are incomplete and inconsistent.

So, current logic studies, including relevance logic or any other substructural/paraconsistent logics, are inadequate.

There are countless types of mathematical logic and philosophical logic, but none of them could really judge the true/false in natural languages and sciences.

The following analyses could provide the foundation for a better scientific logic.

1) Most of numbers are not computable, or even not definable. How many natural laws are critical on these incomputable or undefinable numbers? This question cannot be answered by humans' sciences and verified by scientific experiments.

It is NOT a trivial issue. So, humans will never have the Theory of Everything. The logic in Prof. Gerard't Hooft's article Free Will in the Theory of Everything is wrong.

2) Actually, humans' sciences are NOT consistent and complete. Even if some pompous physicists still think the problems be trivial in physics, these problems would be amplified enormously in life sciences, and especially in intelligence sciences.

3) Thus, physical sciences, life sciences, intelligence sciences need very different reference systems. Humans should not stop at the reference system theory of general relativity.

4) These different reference systems need very different logic frameworks. There are paradigm shifts across these different reference systems related to logic frameworks. So, people should be specific about what exactly these paradigm shifts are in various situations.

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Freeman Dyson
Gerard't Hooft

Gerard't Hooft Gerard't Hooft

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AGI

1 motif

Ich will dem Schicksal in den Rachen greifen

UK

Human Brain project
BRAIN Initiative
neuron
AGI

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paradigm
shift

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the selfish gene the selfish gene

the selfish gene Richard Dawkins Alfred Wallace Charles Darwin

paradigm shift AGI

Mirror neuron

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Jesuit reduction

"If I gave an AI ... every single test that you can possibly imagine, you make that list of tests and put it in front of the computer science industry, and I'm guessing in five years time, we'll do well on every single one,"

billion-dollar

inconsistency O.J.Simpson

inconsistency

Hibert Space Word-embedded vector space Universal Approximation Theorem

1990 年，日本科学家首次提出“意识上传”的概念，即通过扫描和复制人的大脑神经回路，将意识上传到计算机中，实现意识的数字化和永生。

这一概念在科学界引起了广泛讨论。支持者认为，意识上传可以实现意识的永生，避免衰老和死亡。反对者则认为，意识上传只是复制了一个人的意识，而不是真正的意识本身。此外，意识上传还涉及到伦理、隐私和身份认同等问题。

目前，意识上传的研究还处于理论阶段。科学家们正在探索如何扫描和复制大脑神经回路，以及如何将复制的意识上传到计算机中。一些科学家认为，意识上传可能需要等到 21 世纪中叶才能实现。

除了意识上传，科学家们还在研究其他与意识相关的问题。例如，Human Brain project 和 BRAIN Initiative 等项目正在研究人脑的神经回路和意识产生的机制。此外，一些科学家还提出了 mirror neuron 理论，认为镜像神经元在意识产生中起着重要作用。